

Date: Wednesday, 1/23/2008 11:37:07 AM  
 User: Kim Johnston

## Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : STEP EXTRUSION
Job Number : 36923	
Estimate Number : 10058	
P.O. Number :	Part Number : D2622120C
This Issue : 1/23/2008 S.O. No. :	Drawing Number : D2622 REV C1
Prsht Rev. : NC	Project Number : N/A
First Issue : / / Type : PURCHASED PARTS	Drawing Revision : C1
Previous Run : 35618	Material :
Written By : <u>10080123</u>	Due Date : 2/10/2008 Qty: 120 Um: Each
Checked & Approved By : <u>10080123</u>	
Comment : Est. A: 02.11.12 New Issue KJ/RF	

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0

PG

PURCHASING



Comment: PURCHASING

Issue P/O: 552110080123

- a) Extrude as per Dwg D2622 Rev. C
- b) Material: 6061-T6 (QQ-A-200/8)
- c) Minimum yield tensile strength = 35 ksi
- d) Minimum ultimate tensile strength = 38 ksi
- e) Minimum elongation = 8%
- f) Order at 120" longg) Bon L Canada Inc. tool # 897123 Rev. A
- h) To be packed per DSK 066
- i) Pull test to ASTM standard B221 required.
- j) Material certification is required

120

2.0

D2622120CP

Extrusion



Comment: Qty.: 1.0000 Each(s)/Unit Total : 120.0000 Each(s)  
 Extrusion

3.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

- Receive & Inspect For Transit Damage
- Ensure material certification is attached

10080123130

4.0

QC6

DIMENSIONAL CHECK



Comment: DIMENSIONAL CHECK

- Inspect dimension per Dwg D2622
- Check Pull test per Dwg D2622 for compliance page attached
- Check hardness with Webster tester

10080123 counts  
130

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2622-120C PAR #: N/A Fault Category: Prod / Packaging NCR: Yes No DQA: AD Date: 08/02/15  
 QA: N/C Closed: AD Date: 08/02/19

NCR: <u>36923</u>		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
08/02/11	#	3# steps D2622-120C Pounds with Defects 1- looks like it has hole hole	<u>AS1042</u>	Parts are acceptable on * Surface only Scrap all Destroy all Three parts QA (3)	N/A ↓	08-02-14	<u>AS1042</u>	08/02/14
		21- with large dent on side 1- with that has a twist in it	<u>AS1042</u>	use for short steps	N/A ↓	08-02-14	<u>AS1042</u>	08/02/11

NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: STEP EXTRUSION

Job Number: 36923

Part Number: D2622120C

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

*in the Back by Return Date*  
*08/02/14* *Jim*

6.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

*08/02/15*

Job Completion



*run 2008/2/14*

*130*

*U*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

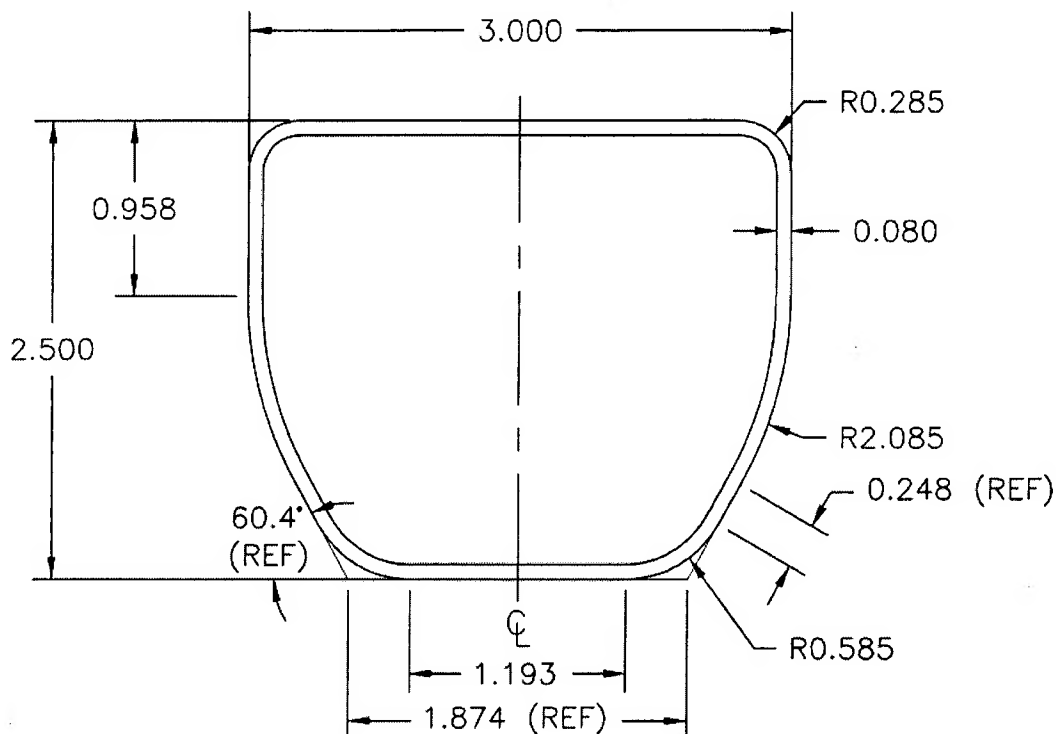
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries




DESIGN KE		DRAWN BY CP		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED H		APPROVED H		DRAWING NO. D2622	REV. C SHEET 1 OF 1
DATE 02.09.11			TITLE STEP EXTRUSION SCALE 1:1		
A	96.11.29		NEW ISSUE		
B	97.12.12		CHANGE MATERIAL, ADD TOL. QSI		
C	02.09.11		0.080 WAS 0.085; ADD PART & DIE No.		
CI	H CP	02.10.04	ADD 'REV. A' TO DIE NUMBER.		

RELEASED  
02.09.11 #



#### D2622-XXX STEP EXTRUSION

- 1) PART NUMBER IS D2622-XXX WHERE 'XXX' IS CUT LENGTH IN INCHES (EG. D2622-120 IS 120" LONG)
- 2) MATERIAL 6061-T6 (QQ-A-200/8)
- 3) MANUFACTURED USING BON-L DIE # 897123 Rev. A 
- 4) A SAMPLE FROM EACH BATCH WILL BE PULL TESTED TO ASTM STANDARD B221 BY AN APPROVED TESTING FACILITY TO ENSURE THAT THE BATCH MEETS THE MINIMUM MECHANICAL PROPERTIES STATED BELOW:

MINIMUM TENSILE YIELD STRENGTH = 35 ksi  
MINIMUM ULTIMATE TENSILE STRENGTH = 38 ksi  
MINIMUM ELONGATION = 8%

- 5) PART IS SYMMETRIC ABOUT CENTERLINE
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 7) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 36923

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**BON L CANADA INC**

500 EDWARD AVENUE  
RICHMOND HILL, ON L4C 4Y9

**CERTIFICATE OF COMPLIANCE**

Cart Date	Cart No	Sales Order	Page
02/04/08	172753	21963	1
Cart PO	B/L No	Lot	Date
5521	00371407	21963010	2/04/08

Sold To	Ship To
46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7	46024 DART AEROSPACE LTD. 1270 ABERDEEN ST. HAWKESBURY, ON K6A 1K7

Item No	Part No	Item Description	Cust Part
1.000	DAA-897123-1	120" Mill 6061 T6	D2622
Gross Weight	562 KGS		
Net Qty	542 KG	130 PC	396 M 2 PKG
Specification	Dis Desc		
AMS-QQ-A-200/8 & ASTM B221-06			

**Mechanical Tests:**

Test No.	Tensile MPA / KSI	Yield MPA / KSI	%Elongation	Conductivity	Bend/ Drift HREW
1	306.2 / 44.4	271.1 / 39.3	10.1	.0	93

**Chemical Analysis:**

SI	FE	CU	MN	MG	CR	NI	ZN	GA	V	TI	ZR	OTHER
.61	.21	.21	.08	.82	.06	.000	.04	.000	.000	.02	.000	.00

This will certify that the material described herein has been inspected and tested in accordance with Bon L Canada's standard sampling and testing procedures or in accordance with the requirements of any specifications forming a part of the material description to the extent indicated herein. Data of chemical composition for the material and test results from samples representative of the material are set forth above hereof or in any attachments hereto. This information shows that the material meets the applicable requirements. Inspection and test records are maintained on file. This certificate shall be deemed apart of and subject to the terms and conditions of warranty set forth on the reverse side of our order acknowledgement form. No other warranties are applicable.

D. VanBakel, QA Manager Signed for Bon L Canada



INVOICING COMPANY AND LOCATION  
BUREAU DE FACTURATION

BONDEAU D'EXPÉDITION

BON L CANADA INC.

BON L CANADA INC  
500 EDWARD AVENUE  
RICHMOND HIL ON L4C 4Y9

ADCT# 00046024

MANIFEST DATE/DATE D'EXPÉDITION

02-04-02

MANIFEST NUMBER/N° D'EXPÉDITION

631348

SALES ORDER NUMBER/N° DE COMM.

21942

REFER TO  
THESE NUMBERS ON  
ALL CORRESPONDENCE.  
RÉFÉREZ-VOUS À CES  
NUMÉROS POUR TOUTE  
CORRESPONDANCE.

CREDIT REP/REP. DU CRÉDIT  
HAMBROOK, PAU  
905-508-8250

SALES REP/REP. DES VENTES

FIELD SALES REP/REP. RÉGIONAL DES VENTES

Kutter A  
450-435-6251

CUST SERVICE REP/REP. SERVICE CLIENTÈLE

Burton D  
905-427-2227

SHIP TO/EXPÉDIÉ À  
RT AEROSPACE LTD.  
170 ABERDEEN ST.  
WILKESBURY  
PA 167

SOLD TO/VENDU À  
DART AEROSPACE LTD.  
1270 ABERDEEN ST.  
WILKESBURY  
PA 167

\*\*\*\*\*  
\*D/P\*  
\*\*\*\*\*

LOC/USINE

TRAILER NO./N° DE REMORQUE

SALESMAN/VENDEUR

R1H

QUE

59358

PHONE 613-632-5200

PHONE 613-632-5200

CUSTOMER ID/N° DU CLIENT

ORDER DATE  
DATE DE LA COMMANDE

CUST. PO. NO./N° DE COMM. DU CLIENT

JOB/PROJET

BILL OF LADING NUMBER/N° DE CONNAISSANCEMENT

46024

01/24/08

5321

00371407

EIM ID. ITEM	ORDER QUANTITY QTE COMMANDÉE	UNIT UNITÉ	PREVIOUS SHIPPED QTY. QTE DÉJÀ EXPÉDIÉE	MFG. PART NUMBER N° DE PIÈCE DU FOURNISSEUR	ALLOY & TEMPER ALLIAGE & TREMPÉ	FINISH DESCRIPTION DESC. DE LA FINITION	THIS SHIPMENT/CETTE EXPÉDITION			UNIT UNITÉ	QUANTITY DUE QUANTITÉ PRÉVUE
				CUSTOMER PART NUMBER NUMÉRO DE PIÈCE DU CLIENT	LENGTH LONGUEUR	FABRICATION DESCRIPTION TYPE DE FABRICATION	NO. PKGS. N° DE PAQUETS	GROSS WT. POIDS BRUT	NET WT. POIDS NET		
01		KG	0	DAA-897122-1	6061 /T6	MILL	2	562	542	KG	0
		M	0	D2622	120"	CERTIFICATE OF COMP			396.24	M	0
	121	PC	0		43/16 "	(+015-015,0139-0102)			130	PC	0
					LO "						
				DETAIL: LOT/TICKET		21943010 / 184344	1	261	251		60 PC
						21963010 / 184345	1	301	291		70 PC

13

CRM NO. B1065 REV. D  
NO RETURN MATERIALS WILL BE ACCEPTED FOR CREDIT WITHOUT PERMISSION  
AUCUN RETOUR DE MATÉRIEL NE SERA ACCEPTÉ POUR CRÉDIT SANS AUTORISATION

CUSTOMER  
CLIENT

TOTAL/TOTAUX